

REMARKS

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Claims 1-35 are now present in this application, of which claims 1, 14, 22, and 24 are independent. By this amendment, claims 1-3, 6, 14, 16, 17, 22-24, and 26 have been amended.

Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. § 119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document.

Information Disclosure Citation

Each of the Information Disclosure Statements filed by Applicants to date have been considered by the Examiner, and initialed PTO-SB08 forms have been provided by the Examiner. Therefore, no outstanding issues remain with respect to the consideration of the Information Disclosure Statements.

Drawings

Since no objection has been received, Applicants assumes that the drawings are acceptable and that no further action is necessary. Confirmation thereof in the next Office Action is respectfully requested.

Obviousness-Type Double Patenting Rejection

Claims 1, 14, and 27 stand provisionally rejected under the judicially created doctrine of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 21 of U.S. Patent Application No. 11/723,661. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

For ease of comparison, claims 1 and 21 of U.S. Patent Application No. 11/723,661 including the amendments to those same claims made July 19, 2007, are listed below:

1. A washing method comprising:

placing laundry into a wash drum;

supplying steam to the laundry in the wash drum with a steam supply unit; and

circulating water inside the wash drum with a circulation pump.

21. (Currently Amended) The washing method of claim 1, further comprising:

supplying water into the wash drum prior to circulating said water.

Applicants respectfully submit that each of claims 1, 14, and 27 are directed to washing methods that recite steps that are not set forth in claims 1 and 21 of U.S. Patent Application No. 11/723,661 including, among other steps, rotating a wash tub or wash drum about a substantially horizontal axis and injecting steam at the top of the wash tub or wash drum.

Moreover, Applicants respectfully submit that MPEP 800(I)(B)(1) states the following:

If a "provisional" nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer. If the ODP rejection is the only rejection remaining in the later-filed application, while the earlier-filed application is rejectable on other grounds, a terminal disclaimer must be required in the later-filed application before the rejection can be withdrawn.

If "provisional" ODP rejections in two applications are the only rejections remaining in those applications, **the examiner should withdraw the ODP rejection in the earlier filed application** thereby permitting that application to issue without need of a terminal disclaimer. (Emphasis added) A terminal disclaimer must be required in the later-filed application before the ODP rejection can be withdrawn and the application permitted to issue. If both applications are filed on the same day, the examiner should determine which application claims the base invention and which application claims the improvement (added limitations). The ODP rejection in the base application can be withdrawn without a terminal disclaimer, while the ODP rejection in the improvement application cannot be withdrawn without a terminal disclaimer.

While U.S. Patent Application No. 11/723,661 has not been examined yet, it is apparent from M.P.E.P. 800(I)(B)(1), the earlier filed application should be allowed to pass to issue if there are no other grounds for rejecting the earlier filed application. Because the present application is the earlier filed application, Applicants respectfully request that the provisional ODP be withdrawn.

Rejection Under 35 U.S.C. § 112, 2nd Paragraph

Claim 6 stands rejected under 35 U.S.C. § 112, 2nd Paragraph. This rejection is respectfully traversed.

The Examiner has set forth certain instances wherein the claim language is not clearly understood.

In order to overcome this rejection, Applicants have amended claim 6 to delete the allegedly confusing subject matter. Applicants respectfully submit that the claims, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejections Under 35 U.S.C. §§ 102 and 103

Claims 1 and 24-35 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sulzmann. Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sulzmann. Claims 3-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sulzmann in view of Nakamura. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that independent claim 1 has been amended to recite a combination of steps in a washing method in a steam injection type washing machine including "a washing step for performing a washing process while rotating a

wash tub about a substantially horizontal axis when wash water is supplied into the wash tub” and a steam supplying step for injecting steam into the wash tub at the top of the wash tub during execution of the washing step, thereby wetting clothes rapidly in the wash tub.”

Similarly, independent claim 14 has been amended to recite a combination of steps in a washing method in a steam injection type washing machine including “a washing step for wetting clothes contained in a wash tub by wash water supplied into the wash tub while circulating the wash water and spraying the wash water into the wash tub at the top of the wash tub, and performing a washing process while rotating the wash tub about a substantially horizontal axis” and “a steam injecting step for injecting the steam generated at the steam generating step into the wash tub at the top of the wash tub, thereby wetting clothes rapidly in the wash tub.”

Independent claim 22 has been amended to recite a combination of steps in a washing method in a steam injection type washing machine including “a washing step for performing a washing process while rotating a wash tub about a substantially horizontal axis when wash water is supplied into the wash tub” and “a steam injecting step for injecting the generated steam into the wash tub until a wash water temperature of the wash tub reaches a predetermined wash water temperature, thereby wetting clothes rapidly in the wash tub.”

Similarly, independent claims 24 has been amended to recite a combination of steps in a washing method in a washing machine including “washing clothes in a wash drum with water by rotating the wash drum about a substantially horizontal axis” and “injecting steam into the wash drum at the top of the wash drum with the water therein during the washing step, thereby wetting clothes rapidly in the wash drum.”

At the outset, Applicants submit that the present invention, as set forth in independent claims 1, 14, 22, and 24, is related to washing methods for washing machines having washing tubs or washing drums therein, the tubs or drums being rotated about a horizontal axis. This type of washing machine differs substantially from a vertical axis type washing machine, such as that disclosed in Nakamura. In particular, the latter washing machine relies on laundry being fully submerged in wash water during the washing process while the former washing machine relies on

laundry being wetted, but not submerged in wash water. Accordingly, the soaking process, which is closely tied to cleaning efficiency, is different for the two types of washing machines.

Because a horizontal axis type washing machine cleans laundry by circumferentially lifting and dropping the laundry, the laundry is not submerged in wash water. One of ordinary skill in the art would not look to teachings from vertical axis washing machines to modify horizontal axis type washing machines since slight modifications could impact the cleaning efficiency and power consumption of the horizontal axis type washing machines. Therefore, because Nakamura is not directed to a horizontal axis type washing machine, Nakamura is not relevant prior art to the present invention and the § 103 rejections of claims 3-23 must be withdrawn.

Sulzmann discloses a horizontal type washing machine where steam is supplied into a lower portion of the tub. Consequently, the steam is supplied into wash water stored in the tub and the purpose of the steam is to heat the wash water in the tub. However, according to the claimed invention, steam is supplied into the wash tub or wash drum at the top of the tub or drum, thereby heating the laundry and increasing the atmospheric temperature inside the tub. Heating the wash water for increasing the temperature inside the wash drum using a tub heater or steam like Sulzmann requires more energy and time. However, as in the present invention, by injecting steam into the wash tub or wash drum at the top of the tub or drum requires less energy and time. Therefore, in the present invention, it is possible to rapidly achieve the wetting of clothes in the wash tub or wash drum while achieving an enhancement in sterilization and washing performance. In addition, consumption of water and electrical energy can be reduced.

Further, according to the present invention, wash water supplied into the wash tub is pumped to a top portion of the wash tub to circulate through the wash tub. And then, the circulated wash water is sprayed into the wash tub at the top of the tub, thereby further assisting in the wetting of clothes with less wash water and time.

Because the Examiner has indicated that Sulzmann fails to explicitly teach injecting steam at the top of the wash tub or wash drum, the § 102 rejections of claims 1 and 24-35 must be withdrawn.

In addition, the Examiner's blanket assertion that it would be obvious to modify Sulzmann to inject steam at the top of the wash tub is counter to the purpose of providing steam into the wash

water of Sulzmann. Consequently, it would not have been obvious to modify Sulzmann to inject steam at the top of the wash tub. None of the other references cited by the Examiner were relied on to overcome the deficiencies identified above with respect to Sulzmann.

For at least these reasons, it would not have been obvious to one of ordinary skill in the art to modify Sulzmann as suggested by the Examiner and claims 1, 14, 22, and 24 are allowable.

With regard to dependent claims 2-13, 15-21, 23, and 25-35, Applicants submit that these claims depend, either directly or indirectly, from one of independent claims 1, 14, 22, or 24, which are allowable for the reasons set forth above, and therefore these claims are also allowable based on their dependence from one of claims 1, 14, 22, or 24. Reconsideration and allowance thereof are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Chad D. Wells, Registration No. 50,875, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By


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